

**Notice of Allowability**

Application No.

09/839,071

Examiner

CHAMELI C. DAS

Applicant(s)

BERA, RAJENDRA KUMAR

Art Unit

2192

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the remarks filed on 1/14/05.
2. ☒ The allowed claim(s) is/are 1-7.
3. ☒ The drawings filed on 1/8/02 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 5/25/05.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

1. This action is in response to the remarks filed on 1/14/05.
2. In view of the applicant's remarks filed on 1/14/05, the rejection of claims 1-7 made in the earlier office action is hereby withdrawn.
3. Claims 1-7 have been allowed.

#### **EXAMINER'S AMENDMENT**

4. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Jack P. Firedman, applicant's attorney on 5/24/05.

The application has been amended as follows:

***In Claims:***

***Claim 1 (currently amended):***

at line 1, after "environment", delete [the] and insert an

at line 3, delete [optimisation] and insert optimization

at line 3, after "verification", delete [, program proving,]

at line 7, before "expression", delete [the] and insert an

at line 7, before "righthand", delete [the]

at line 9, before "order" delete [the] and insert an

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at line 9, before "last" delete [the] and insert a

at line 10, delete [the first] and insert a first statement

at line 10, before "inspection" delete [the] and insert an

at line 11, before "last" delete [the] and insert a

at line 11, delete [the first] and insert a first unprocessed assignment statement

at line 12, before "variable" delete [the] and insert a

at line 12, before "lefthand" delete [the]

at line 13, before "righthand" delete [the]

at line 20, delete [less] and insert and not comprising

at line 22, delete [one of the output variables] and insert an output variable

at line 28, before "key" delete [the] and insert a

at line 28, at the end of the line, delete [[.]] and insert ;

***Claim 2 (currently amended):***

at line 2, before "applicability" delete [the] and insert an

***Claim 3 (currently amended):***

at line 1, delete [Step] and insert step

***Claim 4 (currently amended):***

at line 1, delete [Step] and insert step

***Claim 5 (currently amended):***

at line 1, delete [Step] and insert step

at line 1, before "number" delete [the] and insert a

at line 2, before "number" delete [the] and insert a

***Claim 6 (currently amended):***

at line 1, before "equivalence", delete [the] and insert an

at line 2, delete [optimisation] and insert optimization

at line 3, after "verification", delete [, program proving,]

at line 3, at the end of the line, after "comprising" insert :

at line 4, delete [[:]]

at line 7, before "expression", delete [the] and insert an

at line 8, before "righthand", delete [the]

at line 9, at the end of the line delete [the] and insert an

at line 10, before "last" delete [the] and insert a

at line 10, delete [the first] and insert a first statement

at line 10, before "inspection" delete [the] and insert an

at line 11, before "last" delete [the] and insert a

at line 12, delete [the first] and insert a first unprocessed assignment  
statement

at line 12, before "variable" delete [the] and insert a

at line 13, before "lefthand" delete [the]

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at line 13, before “righthand” delete [the]

at line 21, delete [less] and insert and not comprising

at line 23, delete [one of the output variables] and insert an output variable

at line 24, delete [(c)] and insert (e)

at line 29, before “key” delete [the] and insert a

at line 29, at the end of the line, delete [[.]] and insert ;

***Claim 7 (currently amended):***

at line 2, before “equivalence”, delete [the] and insert an

at line 3, delete [optimisation] and insert optimization

at line 4, after “verification” delete [, program proving,]

at line 8, at the end of the line, delete [the] and insert an

at line 9, before “righthand”, delete [the]

at line 10, at the end of the line, delete [the] and insert an

at line 11, before “last” delete [the] and insert a

at line 11, delete [the first] and insert a first statement

at line 11, before “inspection” delete [the] and insert an

at line 12, before “last” delete [the] and insert a

at line 13, delete [the first] and insert a first unprocessed assignment statement

at line 13, before “variable” delete [the] and insert a

at line 13, before “lefthand” delete [the]

at line 14, before "righthand" delete [the]

at line 21, delete [less] and insert and not comprising

at line 23, delete [one of the output variables] and insert an output variable

at line 24, delete [(c)] and insert (e)

at line 29, before "key" delete [the] and insert a

at line 29, at the end of the line, delete [.] and insert ;

#### ***REASON FOR ALLOWANCE***

5. The following is an examiner's statement of reason for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, a method for determining, in a computer environment, an equivalence, if any, of two blocks of assignment statements in a computer program for use in compiler optimization of source code. The method comprising: processing in each array, during processing, if a variable appearing on left-hand side of an unprocessed assignment statement also appears on the right-hand side of the assignment statement being processed, replacing all occurrences of such variable on the right-hand side of the assignment statement being processed, non-recursively, by the right-hand side of the said unprocessed assignment statement; as recited in the independent claims 1, 6 and 7.

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**Conclusion**

6. The prior art made or record and not relied upon is considered pertinent to applicant's disclosure.

TITLE: Method of processing a plurality of code systems, US 4692896 A

TITLE: Method and system for identifying locations to move portions of the computer program, US 6415433 B1

TITLE: Anticipatory optimization with composite folding, US 6745384 B1

TITLE: Cost-sensitive SSA-based strength reduction algorithm for a machine with predication support and segmented addresses, US 6286135 B1

TITLE: System and method for performing selective dynamic compilation using run-time information, US 6427234 B1

TITLE: Collection of timing and coverage data through a debugging interface, US 6721941 B1.

TITLE: Global Value Numbers and Redundant Computations, author: Rosen et al, ACM, 1988.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chameli Das whose telephone number is 571-272-2696.

The examiner can normally be reached on Monday-Friday from 7:00 A.M. to 3:30 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Tuan Dam can be reached at 571-272-2695. The fax number for this group is (703) 872-9306.

An inquiry of general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 571-272-2100.

*Chameli C. Das*  
**CHAMELI C. DAS**  
**PRIMARY EXAMINER**  
*5/25/05*